



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,513	07/08/2003	R. Bruce Wallace	15929ROUS02U	9214
34645	7590	09/20/2006	EXAMINER	
JOHN C. GORECKI, ESQ. P.O BOX 553 CARLISLE, MA 01741			SON, LINH L D	
			ART UNIT	PAPER NUMBER
			2135	

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/615,513	Applicant(s) WALLACE ET AL.	
	Examiner Linh LD Son	Art Unit 2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>07/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responding to the filing of the Application received on 07/08/2003.

2. Claims 1-25 are pending.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-10, 12-18, 20, 22-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Baker, hereinafter "7,035,898".

5. As per claim 1:

Baker discloses "A industrial network, comprising: a local area network" in (Col 2 lines 15-32); and

"a security policy implementation point (SPIP) configured to apply policy in the control of network access to at least one factory machine" in (Col 5 lines 12-35).

As per claim 2:

Baker discloses "The industrial network of claim 1, further comprising a programmable logic controller connected to the at least one factory machine, and wherein the SPIP is integrated with the programmable logic controller" in (Col 5 lines 12-35).

6. As per claim 3:

Baker discloses "The industrial network of claim 1, further comprising a programmable logic controller connected to the at least one factory machine, and wherein the SPIP interfaces between the local area network and the programmable logic controller" in (Col 5 lines 12-35).

7. As per claim 4:

Baker discloses "The industrial network of claim 3, wherein the local area network is an Ethernet network, wherein the SPIP is configured to communicate with network devices on the local area network over the Ethernet network, and wherein the SPIP is configured to communicate with the programmable logic controller using a protocol selected from at least one of Profibus, Controller Area Network, RS-232, RS-422, and RS-485" in (Col 2 lines 22-25).

8. As per claim 5:

Baker discloses "The industrial network of claim 1, wherein the local area network includes at least one Ethernet switch/router, and wherein the SPIP is included as a blade in the Ethernet switch/router" in (Col 2 lines 30-32).

9. As per claim 6:

Baker discloses "The industrial network of claim 5, wherein the SPIP is configured to implement security policy to control network access to at least one PLC connected to the Ethernet switch/router through the SPIP" in (Col 2 lines 30-32, and Col 6 lines 1-5).

10. As per claim 7:

Baker discloses "The industrial network of claim 6, wherein the subnet includes at least one programmable logic controller is configured to control the operation of at least one of said factory machines" in (Col 2 lines 15-32).

11. As per claim 8:

Baker discloses "The industrial network of claim 1, wherein the SPIP comprises an authentication module and an authorization module to control network access to said factory machine" in (Col 5 lines 15-36).

12. As per claim 9:

Baker discloses "The industrial network of claim 1, wherein the industrial network is an un-trusted network configured to interconnect network services with a plurality of

Art Unit: 2135

SPIPs associated with factory machines, and wherein the network services are configured to enable operation of the factory machines to be altered through the industrial network" in (Col 5 lines 15-36).

13. As per claim 10:

Baker discloses "The industrial network of claim 1, wherein the SPIP includes a local policy configured to enable the SPIP to enforce network policy in connection with local accesses" in (Col 5 lines 15-36, and Col 5 line 65 to Col 6 line 6).

14. As per claim 12:

Baker discloses "The industrial network of claim 1, wherein the SPIP comprises a network policy configured to enable the SPIP to enforce network policy by interfacing with network services" in (Col 5 lines 10-37).

15. As per claim 13:

Baker discloses "The industrial network of claim 12, wherein the SPIP comprises a local authentication policy and information associated with authorized users and indicative of authorization policy information associated with said at least one factory machine" in (Col 5 lines 10-37).

16. As per claim 14:

Baker discloses "A Security Policy Implementation Point (SPIP) for use in an industrial network, comprising:

a local path configured to implement a local access policy” in (Col 5 lines 10-37);
and

“a network path configured to secure network paths [Web access over the network to the machine to configure PLC. The path needs authentication before get accessed] on the industrial network” in (Col 5 lines 10-37).

17. As per claim 15:

Baker discloses “The SPIP of claim 15, further comprising programmable logic controller circuitry configured to function to control at least one factory machine” in (Col 5 lines 10-37).

18. As per claim 16:

Baker discloses “The SPIP of claim 15, wherein the local access policy includes enabling access to an associated factory machine to enable operation of the factory machine to be altered without verification of authorization and authentication of an user seeking to alter the operation” in (Col 5 lines 25-37).

19. As per claim 17:

Baker discloses “The SPIP of claim 16, wherein the local path further comprises an accounting module configured to record accesses to at least one of the SPIP, an associated programmable logic controller, and an associated factory machine” in (Col 2 lines 15-32).

20. As per claim 18:

Baker discloses "The SPIP of claim 15, wherein the local path comprises an authentication module configured to authenticate the identity of an individual seeking to access a device through the SPIP, and an authorization module configured to assess an authorization associated with the individual to ascertain whether the individual is authorized to access the device" in (Col 5 lines 10-37).

21. As per claim 20:

Baker discloses "The SPIP of claim 18, wherein the authentication and authorization modules maintain a local copy of authorized users and authentication policy to allow local access to the SPIP" in (Col 5 lines 20-25).

22. As per claim 22:

Baker discloses "The SPIP of claim 15, further comprising network ports configured to interface with the industrial network, and output ports configured to interface with a programmable logic controller.

23. As per claim 23:

Baker discloses "The SPIP of claim 22, wherein the network ports are configured to communicate on the industrial network utilizing an Ethernet protocol; and wherein the output ports are configured to communicate with the programmable logic controller using a protocol understandable by the programmable logic controller" in (Col 3 lines 20-30).

Art Unit: 2135

24. As per claim 24:

Baker discloses "The SPIP of claim 15, further comprising network ports configured to interface with the industrial network, control logic configured to implement a control program associated with a programmable logic controller, and interface ports configured to interface with a factory machine" in (Col 3 lines 20-30).

25. As per claim 25:

Baker discloses "The SPIP of claim 24, wherein the interface ports comprise at least one input port configured to receive input from an environmental sensor, and at least one output port configured to control at least one electro-mechanical device" in (Col 3 lines 1-5) [Factory automation device is a device that has sensor and electrically powered].

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2135

27. Claims 11, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker, in view of Tilton et al, US Publication No. 20040068562A2, hereinafter "Tilton".

28. As per claim 11:

Baker discloses "The industrial network of claim 10, wherein the local policy comprises: a local access policy configured to require authentication and authorization of at least one of an user and an accessing electronic device for non-emergency attempts to access the SPIP and an alternate access policy configured to allow access to the SPIP" in (Col 5 lines 20-32)

However, Baker does not discloses "maintain an audit log attendant to a local attempt to access the SPIP".

Nevertheless, Tilton discloses "the audit log for network accessing user's attempts" in Para 0047.

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify Baker's invention to incorporate Tilton's teaching of the audit log to keep track of network accessing event and to ensure protection to the network.

29. As per claim 19:

Baker discloses "Tile SPIP of claim 18, wherein the authorization module is an interface to a Lightweight Directory Access Protocol (LDAP) server, and wherein the

Art Unit: 2135

authentication module is an interface to a Remote Access Dial In User Service (RADIUS) server" in (Titon, Figure 1 #54, Para 0021-22).

30. As per claim 21:

Baker discloses "The SPIP of claim 15, wherein the local path comprises a virtual private network module configured to participate in a virtual private network tunnel established on the industrial network." In (Figure 1 #30a, Para 0047) [Private Network]

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh LD Son whose telephone number is 571-272-3856. The examiner can normally be reached on 9-6 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Linh LD Son

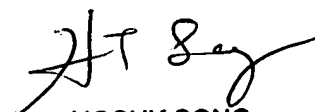
Application/Control Number: 10/615,513

Page 11

Art Unit: 2135

Examiner

Art Unit 2135

A handwritten signature in black ink, appearing to read 'Hosuk Song', with a stylized flourish at the end.

**HOSUK SONG
PRIMARY EXAMINER**